

Remarks of FCC Commissioner Kathleen Abernathy
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As a regulator, I am quite interested in broadband over powerline (BPL) technology for a number of reasons. One of my central objectives as an FCC commissioner is to facilitate the deployment of broadband services to all Americans. I also fundamentally believe that the FCC can best promote consumer welfare by relying on market forces, rather than heavy-handed regulation. The development of BPL networks has the potential to serve both of these key goals. It could bring broadband to previously unserved communities, and the introduction of a new broadband pipeline into the home would foster the kind of competitive marketplace that will eventually enable the Commission to let go of the regulatory reins.

I want consumers to have a choice of multiple, facilities-based providers, including not only cable and DSL, but also, to the extent possible, powerline, wireless, and satellite services. Such a robustly competitive and diversified marketplace is something I would call Broadband Nirvana. We will not get there overnight, but the continuing development of BPL technology is a step in the right direction.

One of the key challenges is the harmful interference that many licensed spectrum users say BPL would cause. The FCC is therefore taking a very hard look at the competing claims about potential interference, in response to a Notice of Inquiry we issued earlier this year. Regardless of what one thinks about the appropriateness of common carrier regulations or related rules to BPL providers, there should be no doubt that regulators cannot permit new technologies to disrupt the operators of spectrum licensees in adjacent bands. The \$64,000 question is whether BPL in fact would cause harmful interference, or whether technology can allow BPL to coexist with amateur radio operators and other licensees? I expect the Commission to weigh in on this debate early next year.

In April 2003, the Commission initiated a proceeding to investigate a number of issues related to carrier current systems, and, in particular, the new high-speed BPL systems. BPL uses existing electrical power lines as a transmission medium to convey information by coupling radio frequency (RF) energy onto the power line.

Historically, various unlicensed devices have used carrier current techniques to couple RF energy to the alternating current (AC) electrical wiring for the purpose of communication. Until recently, however, such devices have operated with relatively limited communications capability on frequencies below 2 MHz. The availability of faster chip sets and the development of sophisticated modulation techniques have produced new digital BPL designs that operate over a wide frequency range (e.g., up to 80 MHz) and are capable of high data rates. BPL systems may be installed on utility poles or medium voltage lines

that carry typically 1,000 to 40,000 volts (*Access BPL*), or inside buildings for on-premises networking (*In-House BPL*).

Access BPL is used to bring Internet and other broadband applications to the home. In-House BPL is used to network computers and printers, as well as smart appliances, within the home. Given that Access BPL can be made available in conjunction with the delivery of electric power, it may provide an effective means for “last-mile” delivery of broadband services and may offer a competitive alternative to DSL, cable modem services and other high-speed broadband technologies. In-House BPL offers similar functionality to Wi-Fi and Ethernet systems.

One of the key issues in the pending FCC inquiry is whether the FCC’s Part 15 rules need to be updated. Part 15 governs all radio frequency devices. This new generation of high-speed BPL devices was not contemplated when the Part 15 rules were formulated. So we need to make sure we have an appropriate method to measure the emission characteristics of BPL systems, particularly the Access type of BPL system. If we can measure emissions, we can evaluate whether BPL can operate without causing harmful interference to adjacent licensees.

The record in this proceeding closed in August. Over 4,600 parties filed comments. I don’t know the exact numbers, but I would guess that most of those comments were filed by amateur radio operators, who tend to oppose deployment of Access BPL systems, based on interference concerns.

While the FCC has a duty to prevent harmful interference, I believe we should be circumspect about applying other types of regulation to nascent technologies such as BPL. It is tempting for regulators to take every new technology or service that comes along and apply the same rules that govern incumbent services. After all, regulatory parity and a level playing field are intuitively appealing concepts. But I believe that it would be a big mistake to carry forward legacy regulations whenever new technology platforms are established. Many of our regulations are premised on the *absence* of competition, and when that rationale is eroded, we must not reflexively hold on to regulations that no longer serve their intended purpose. In fact, many of our old rules not only become unnecessary as markets evolve, but they can be fatal to new services that need room to breathe.

This policy of restraint is something I have described as the Nascent Services Doctrine. By avoiding the imposition of anachronistic regulations, regulators can best allow new technologies and services to flourish. Once facilities-based competition has taken root, regulators can begin to dismantle legacy regulatory regimes, rather than extend those regimes to include the new platforms. In essence, short-term regulatory disparities are tolerated to generate the long-term consumer benefits associated with facilities-based competition.

Regulatory restraint is a necessary part of fostering such competition, because there is little doubt that overregulation can do substantial damage to nascent technologies and

platforms. As the recent turbulence in the capital markets has shown, companies take enormous risks when they invest heavily in communications networks — such as the broadband networks being built today. To avoid creating additional disincentives to invest — beyond those risks that are inherent in the marketplace — we must resist the reflexive tendency to apply legacy regulations to new platforms.

I am therefore pleased that, when the FCC adopted its Notice of Inquiry on BPL systems, we rejected proposals to seek comment on the application of legacy regulatory requirements to this platform. For example, some argued that the Commission should consider issues such as nondiscriminatory access for unaffiliated ISPs, and other regulatory requirements imposed on common carriers. I opposed such efforts because it is premature even to *consider* such regulatory intervention. We do not know at this point how BPL systems will evolve or, candidly, the extent to which BPL services will succeed in the marketplace. The flow of capital at this formative stage is critical. If the Commission signaled that it was heading down a path toward extension of our legacy rules, that would have a chilling effect on investment. Therefore, raising the specter of heavy-handed regulation — that is, ignoring the central premise of the Nascent Services Doctrine — would threaten to undermine our core goals of fostering facilities-based competition and broadband deployment.

In sum, while the FCC has a legitimate interest in regulating new technologies like BPL to prevent harmful interference, we should employ regulation narrowly. Unless and until BPL becomes established in the marketplace, there is no reason to consider imposing regulations designed for monopoly providers.